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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/013,645	01/26/1998	THOMAS D. HENDERSON	PBAER36769	3599

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EXAMINER	
LEE, RICHARD J	
ART UNIT	PAPER NUMBER
2621	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/013,645	HENDERSON ET AL.	
	Examiner	Art Unit	
	Richard Lee	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3 and 9-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3 and 9-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Claims 1, 3, and 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For examples:

(1) claim 1, line 3, "said system" shows multiple antecedent basis (see lines 1-2);

(2) claim 3, line 1, "The system" shows multiple antecedent basis (see claim 1, lines 1-2);

(3) claim 9, line 4, "said system" shows multiple antecedent basis (see lines 1-2);

(4) claim 9, line 5, "an" should be changed to "said" in order to provide proper antecedent basis for the same as specified at line 2;

(5) claim 10, line 1, "The system" shows multiple antecedent basis (see claim 9, lines 1-2); and

(6) claim 11, line 1, "The system" shows multiple antecedent basis (see claim 1, lines 1-2).

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson et al of record (5,440,337) in view of Baker et al of record (5,508,734) and Teo of record (6,128,108).

Henderson et al discloses a multi-camera closed circuit television system for aircraft as shown in Figures 1, 3, and 4, and substantially the same in combination, a closed circuit

television system mounted to an aircraft for an in flight entertainment system for the aircraft, the aircraft having a first plurality of passenger seat positions and a second plurality of passenger seat positions (see Figures 1 and 4, and column 5, line 4 to column 6, line 25) as claimed in claims 1 and 9-11, comprising substantially the same aircraft having a surface (see Figure 1 and column 5, line 4 to column 6, line 25) including an in flight entertainment local area network providing audio and video output (see Figure 5, column 5, line 4 to column 6, line 58, and 26, 28 of Figure 7); video camera mounted to the aircraft and comprising a plurality of sensors (22, 24 of Figure 3) providing a plurality of separate video images (26, 28 of Figure 7 and see column 5, lines 7-15), the video camera having a landscape camera lens rotatable about a mounting axis that is perpendicular to a tangent to the surface of the aircraft (i.e. camera 22 provides a vertical viewing of the landscape, and includes a landscape camera lens that is rotatable about a mounting axis that is perpendicular to a tangent to the surface of the aircraft, since the camera and lens system are mounting in the nose section of an aircraft with rotational and elevation adjustment capabilities for the camera head unit for obtaining the desired fields of view, see column 5, lines 4-58, column 7, lines 24-52); and a video camera control module/unit connected to the video camera for receiving the plurality of separate video images, and connected to the in flight entertainment local area network for providing a forward view image and a downward view image from the plurality of separate images (see Figure 5, column 5, line 4 to column 6, line 58, and 26, 28 of Figure 7).

Henderson et al does not particularly disclose, though, the followings:

(a) the video camera having a wide angle lens rotatable about a mounting axis that is perpendicular to a tangent to the surface of the aircraft as claimed in claim 1;

(b) a first plurality of video display modules for a corresponding first portion of a plurality of passengers, and a second plurality of video display modules for a corresponding second portion of a plurality of passengers, a first and a second plurality of video monitors connected to the first and second plurality of interactive video and audio display units, respectively; a first plurality of interactive video display units connected to the in flight entertainment local area network for receiving the forward view image and the downward view image, each of the first plurality of interactive video display units being located at the first plurality of passenger seat positions, respectively; a second plurality of interactive video display units connected to the in flight entertainment local area network for receiving the omniview frame image and video output, each of the second plurality of interactive video display units being located at the second plurality of passenger seat positions, respectively; the video camera control module/unit for combining the plurality of separate images in an omniview frame image and for providing an omniview frame image based upon the plurality of separate video images; the in flight entertainment local area network receiving the omniview frame image as claimed in claims 1 and 9;

(c) a first plurality of interactive personal control units corresponding to the first portion of the first plurality of passengers, and interfacing between the plurality of passengers and the video camera control module, each of the first plurality of interactive personal control units corresponding to respective ones of the first plurality of video display modules and connected to the video camera control module for receiving the forward view image and the downward view image for each of the first plurality of video display modules for the corresponding first portion of the plurality of passengers; a second plurality of interactive personal control units

corresponding to the second portion of the plurality of passengers, and interfacing between the plurality of passengers and the video camera control module, each of the second plurality of interactive personal control units corresponding to respective ones of the second plurality of video display modules and connected to the video camera control module for receiving the omniview frame image to permit each of the second portion of the plurality of passengers to independently select a desired field of view for each of the second plurality of video display modules for the corresponding second portion of the plurality of passengers from the omniview frame image; a first plurality of personal control units connected to the first plurality of interactive video and audio display units, respectively, each of the first plurality of personal control units controlling selection between the forward view image and the downward view image for each of the first plurality of interactive video and display units independently of each of the other of the plurality of first plurality of video and display units; a second plurality of personal control units connected to the second plurality of interactive video and audio display units, respectively, each of the second plurality of personal control units controlling selection of a desired field of view of a corresponding one of the plurality of second video monitors to electronically pan, tilt and zoom the desired field of view from the omniview frame image for each of the second plurality of interactive video and display units independently of each of the other of the second plurality of interactive video and display units, and the second plurality of personal control units being operatively connected to the video camera to control interactive operation of the video camera as claimed in claims 1, 9, and 11; and

(d) the in flight entertainment local area network providing audio output, a first and second plurality of interactive audio display units connected to the in flight entertainment local

area network for receiving the audio output, and the in flight entertainment local area network connected to the first and second plurality of display modules, a first and second plurality of interactive personal control units, and a first and second plurality of interactive video and audio display units as claimed in claims 1 and 9.

Regarding (a) to (c), Baker et al discloses a method and apparatus for hemispheric imaging which emphasizes peripheral content as shown in Figures 1, 6, and 8, and teaches the conventional use of wide angle lens for camera systems (see column 6, lines 27-39, lines 52-64, column 7, lines 21-51). Since Henderson et al already teaches the use of a camera system that is mounted to the nose of the aircraft thereby providing a lens system that is rotatable about a mounting axis that is perpendicular to a tangent to the surface of the aircraft (see column 5, lines 4-58, column 7, lines 24-52 of Henderson et al), it is hence considered obvious to provide the wide angle lens system of Baker et al for the camera 2 of Henderson et al so that the modified video camera system may be similarly mounted to the aircraft and having a wide angle lens that is rotatable about a mounting axis that is perpendicular to a tangent to the surface of the aircraft. Baker et al also teaches the conventional use of a video camera (10 of Figure 1 and see column 6, lines 27-39, lines 52-64, column 7, lines 16-18) for capturing images for further various image transformations such as constructing abutting subimages, producing entire panoramic images, and display of enhanced hemispheric fields of view (see column 12, lines 5-52, column 13, lines 25-31). It is noted that though the term omniview frame image is silent within Baker et al, it is submitted that such abutting of subimages, production of panoramic images, and creating enhanced hemispheric fields of view as taught in Baker et al provides substantially the same if not the same omniview frame image as claimed. In any event, Teo discloses a method and

system for compositing images and teaches the conventional use of a camera for providing an omniview image by combining images with an extended field of view up to a full 360 degrees (i.e., panoramic image, see column 1, lines 23-38, column 8, lines 6-13). Baker et al also teaches a first and second plurality of video display modules (receive outputs from the RAMDACs 78 of Figure 8) for a corresponding first and second portions of a plurality of passengers, a plurality of first and second video monitors (see Display of Figure 8) being connected to the first and second plurality of interactive video and audio display units, respectively (see column 9, line 35 to column 10, line 29), a first and second plurality of interactive video and audio display units (see Display of Figure 8) connected to the in flight entertainment local area network (i.e., as provided by Henderson et al) for receiving the forward view image, downward view image, and omniview frame image and video output (i.e., the omniview as provided by Baker et al and Teo within the forward view and downward view imaging system of Henderson et al, see column 8, lines 9-19 of Henderson et al, column 12, lines 5-52 and column 13, lines 25-31 of Baker et al, and see column 1, lines 23-38, column 8, lines 6-13 of Teo); the video camera control module/unit for combining the plurality of separate images in an omniview frame image and for providing a forward view image, a downward view image, and an omniview frame image, based upon the plurality of separate video images (i.e., the forward view image, downward view image, and omniview frame image as provided by Henderson et al, Baker et al and Teo for the video display modules of Figure 8 of Baker et al); the in flight entertainment local area network receiving the forward view image, the downward view image, and the omniview frame image (i.e., the omniview frame image as provided by Baker et al and Teo for the in flight entertainment local area network within the forward and downward view selection of Henderson et al, see column 8,

lines 9-19 of Henderson et al, column 12, lines 5-52 and column 13, lines 25-31 of Baker et al, and see column 1, lines 23-38, column 8, lines 6-13 of Teo); a first and second plurality of interactive personal control units corresponding to the first and second portions of the plurality of passengers, and interfacing between the first and second portions of the plurality of passengers and the video camera control module, each of the first and second plurality of interactive personal control units corresponding to respective ones of the first and second plurality of video display modules (i.e., since image transformations such as pans, up/downs, zooms, tilts, rotations, etc. are being processed/controlled by either human or computer input operations within, for example, a video camera control module 80 of Baker et al, such input operations provided via an interactive personal control unit is being attached each of the video control modules 80, thus providing a plurality of interactive personal control units corresponding to respective ones of the plurality of video display modules, see column 12, lines 28-41 and column 13, lines 8-31 of Baker et al) and connected to the video camera control module for receiving the forward view image, the downward view image to permit each of the first portion of the plurality of passengers to independently select between the forward view image and the downward view image for each of the first plurality of video display modules for the corresponding first portion of the plurality of passengers (i.e., users are provided the interactive personal control units connected to the video camera control modules 80 having the capabilities of selecting a desired image within the image transformation system as shown in Figure 8 of Baker al (see column 12, lines 6-8, lines 28-41, column 13, lines 8-31 of Baker et al), and since Henderson et al teaches that an operator may select between the forward and downward looking cameras (see column 8, lines 9-19 of Henderson et al), such selection specifics are considered obvious in view of the

combination of Baker et al and Henderson et al), and connected to the video camera control module for receiving the omniview frame image (see column 12, lines 5-52 and column 13, lines 25-31 of Baker et al and column 1, lines 23-38, column 8, lines 6-13 of Teo) to permit each of the second portion of the plurality of passengers to independently select a desired field of view for each of the second plurality of video display modules for the corresponding second portion of the plurality of passengers from the omniview frame image (i.e., users are provided the interactive personal control units connected to the video camera control modules 80 having the capabilities of selecting a desired image within the image transformation system as shown in Figure 8 of Baker et al (see column 12, lines 6-8, lines 28-41, column 13, lines 8-31 of Baker et al), and an omniview may be selected in view of Baker et al and Teo (see column 1, lines 23-38, column 8, lines 6-13 of Teo)); a first and second plurality of personal control units connected to the first and second plurality of interactive video and audio display units, respectively, each of the first plurality of personal control units controlling selection between the forward view image and the downward view image, each of the second plurality of personal control units controlling selection of a desired field of view of a corresponding one of the plurality of second video monitors to electronically pan, tilt and zoom the desired field of view from the omniview frame image for each of the plurality of interactive video and display units independently of each of the other of the second plurality of interactive video and display units, and the second plurality of personal control units being operatively connected to the video camera to control interactive operation of the video camera (i.e., since Henderson et al teaches the particular selection of forward and downward views and since Baker et al and Teo teaches image transformations such as pans, up/downs, zooms, tilts, rotations, etc. that are being processed/controlled by either

human or computer input operations for the selection of omniview images within, for example, a video camera control module 80 of Baker et al, such input operations provided via a personal control unit connected to an interactive video and audio display unit is being attached to each of the video control modules 80, thus providing the selection between the forward view image and the downward view image within each of the first plurality of personal control units independently of each of the other of the first plurality of interactive video and display units and the selection of a desired field of view corresponding to the plurality of second video monitors to electronically pan, tilt, and zoom the desired field of view from the omni frame image for each of the second plurality of interactive video and display units independently of each of the other of the second plurality of interactive video and display units, and the first and second plurality of personal control units connected to the first and second plurality of interactive video and audio display units, respectively, and wherein the second plurality of personal control units being operatively connected to the video camera 10 to control interactive operation of the video camera, see column 12, lines 28-41 and column 13, lines 8-31 of Baker et al). Therefore, it would have been obvious to one of ordinary skill in the art, having the Henderson et al, Baker et al, and Teo references in front of him/her and the general knowledge of closed circuit television systems, would have had no difficulty in providing the features of a plurality of video display modules, a video camera control module/unit for combining the plurality of separate images in an omniview frame image and for providing an omniview frame image to the plurality of video display modules, and a plurality of interactive personal control units as taught by Baker et al and Teo for the closed circuit television system for an aircraft of Henderson et al as well as the wide angle lens system of Baker et al for the camera 22 of Henderson et al for the same well known

wide angle of viewing and flight entertainment purposes of providing to passengers with the capability to interactively and individually select and/or control a desired field of view from an available multiple fields of view provided by a video camera as claimed.

Regarding (d), Baker et al teaches the conventional use of audio and video capturing functions within the imaging system (see column 9, line 35 to column 10, line 29). In addition, since Baker et al shows a plurality of video display modules, a plurality of interactive personal control units, and a plurality of interactive video and audio display units (see Figure 8), it is considered obvious that such video display modules, personal control units, and interactive video and audio display units may obviously be provided within the in flight entertainment local area network system of Henderson et al, thereby providing the first and second plurality of interactive audio display units connected to the in flight entertainment local area network for receiving the audio output, and the in flight entertainment local area network connected to the first and second plurality of display modules, a first and second plurality of interactive personal control units, and a first and second plurality of interactive video and audio display units as claimed. Therefore, it would have been obvious to one of ordinary skill in the art, having the Henderson et al and Baker et al references in front of him/her and the general knowledge of audio/video connections and functions, would have had no difficulty in providing the audio/video features as well as the plurality of video display modules, the plurality of interactive personal control units, and the plurality of interactive video and audio display units of Baker et al within the aircraft entertainment system of Henderson et al thus providing the audio and video output, and connection of the plurality of video display modules, plurality of interactive personal control

units, and plurality of interactive video and audio display units within the in flight entertainment local are network of Henderson et al for the same well known purposes as claimed.

In re Claim 3, it is considered obvious to provide the claimed numerical angle values for the video cameras and display since these values are merely optimum or workable ranges, and it is not invention to discover the optimum or workable ranges by routine experimentation. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to arrive at the desired numerical angle values to facilitate one's needs through routine experimentation. This opinion/view is supported by In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

4. Regarding the applicants' arguments at pages 7-9 of the amendment filed February 6, 2006 concerning in general that "... As illustrated in Figs. 3, 5 and 7 of Henderson et al, the vertical viewing camera and the horizontally viewing camera have lenses that are not rotatable about a mounting axis that is perpendicular to a tangent to the surface of the aircraft, as is claimed. While the camera control module unit 32 of Henderson et al may be considered to be mounted perpendicular to a tangent to the surface of the aircraft, the camera control module unit of Henderson et al is not rotatable about a mounting axis that is perpendicular to a tangent to the surface of the aircraft, as is claimed ... Henderson et al does not teach, disclose or suggest a video camera mounted to an aircraft and having a wide angle or landscape camera lens rotatable about a mounting axis that is perpendicular to a tangent to the surface of the aircraft, as is claimed ...", the Examiner respectfully disagrees. The applicants' attention is direct to column 7, lines 24-39 of Henderson et al wherein it is taught that "The two camera head units (CHUs), inclusive of their lens assembly, are located within the CMU and secured by means of machined

bracket assemblies; these bracket assemblies provide rotational and elevation adjustments for the camera head unit fields of view ... The cameras are arranged within the CMU so that when the module is installed in the nose section of an aircraft, one camera field of view is downward or perpendicular to the horizontal line of flight". It is therefore clear from this passage within Henderson et al that the downward camera is mounted to the aircraft with a landscape camera lens that is rotatable about a mounting axis that is perpendicular to a tangent to the surface of the aircraft (i.e., the downward camera field of view is perpendicular to the horizontal line of sight). And in view of the wide angle lens system of Baker et al that may obviously be provided within camera 22 of Henderson et al as explained in the above, the modified camera system of Henderson as mounted to the aircraft will similarly provide a video camera having a wide angle lens rotatable about a mounting axis that is perpendicular to a tangent to the surface of the aircraft, as claimed.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Lee whose telephone number is (571) 272-7333. The Examiner can normally be reached on Monday to Friday from 8:00 a.m. to 5:30 p.m, with alternate Fridays off.

RICHARD LEE
PRIMARY EXAMINER

Richard Lee/rl

5/26/06